CLAIMS

1. An organopolysiloxane-modified polysaccharide prepared by esterfication reacting (A) an organopolysiloxane having residual carboxylic anhydride groups and (B) a polysaccharide having hydroxyl groups, wherein the organopolysiloxane is bonded to the polysaccharide through half ester groups.

2. The organopolysiloxane-modified polysaccharide according to claim 1, wherein component (A) is an organopolysiloxane having the formula, $R^1_a R^2_b SiO_{(4-a-b)/2}$

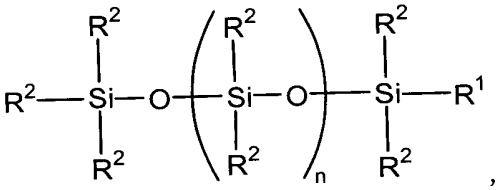
where R^1 is a monovalent organic group containing a residual carboxylic anhydride,

R^2 is a hydrogen atom or monovalent hydrocarbon group

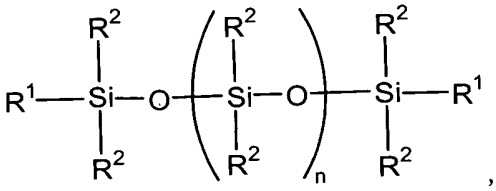
with the proviso that at least one R^2 is a monovalent hydrocarbon when b is greater than 1,

and the subscripts "a" and "b" are numbers satisfying the conditions $0<a\leq 1$, and $0<b\leq 3$, respectively, and $0<a+b<4$.

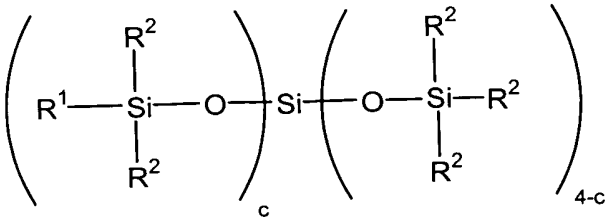
3. The organopolysiloxane-modified polysaccharide according to claim 1, wherein component (A) is an organopolysiloxane having the formula selected from the group;



,



,



where R^1 is a monovalent organic group containing a residual carboxylic anhydride group,

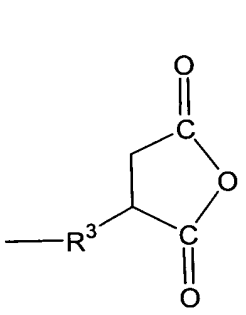
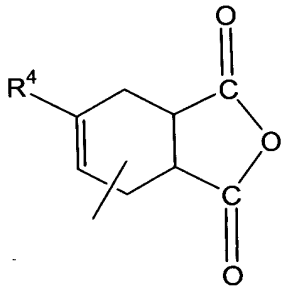
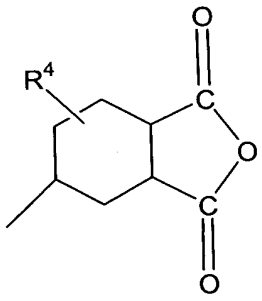
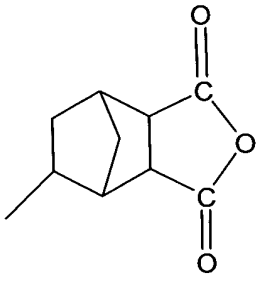
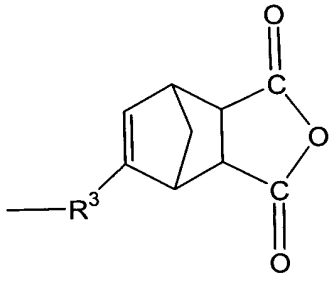
R^2 is a hydrogen atom or monovalent hydrocarbon group,

with the proviso that at least one R^2 is a monovalent hydrocarbon,

n is an integer greater than zero, and

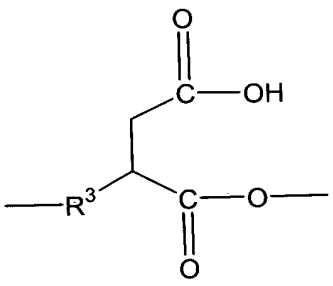
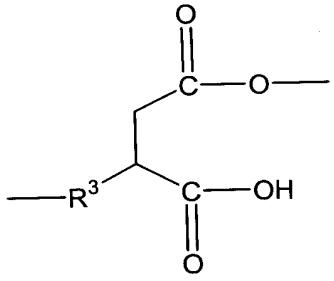
c is an integer from 1 to 4.

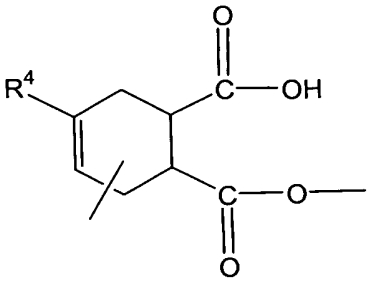
4. The organopolysiloxane-modified polysaccharide according to claim 2 or 3, wherein the residual carboxylic anhydride has a formula selected from the group:

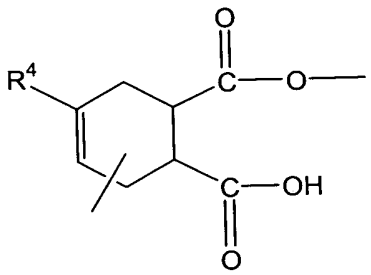

,

,

,

, and

,

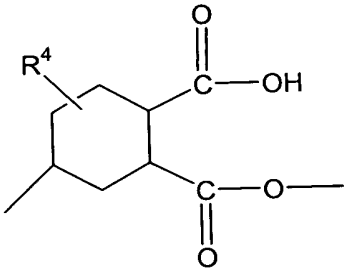
where R^3 is a divalent hydrocarbon group, and R^4 is a hydrogen atom or alkyl group.

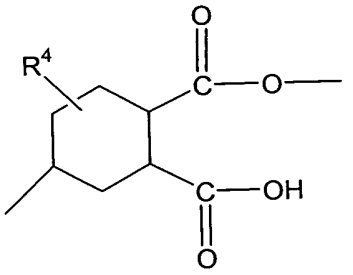
5. The organopolysiloxane-modified polysaccharide according to claim 1, wherein the half ester group has a formula selected from the group;

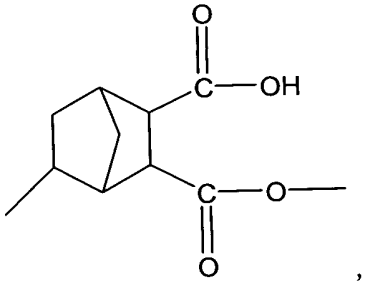

,

,

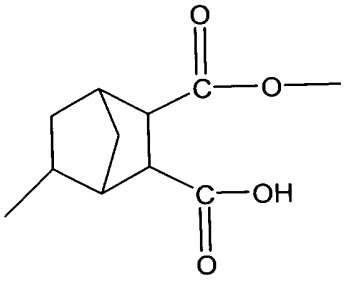

,

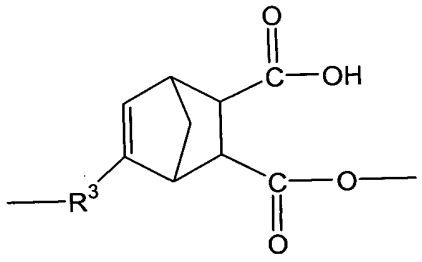

,

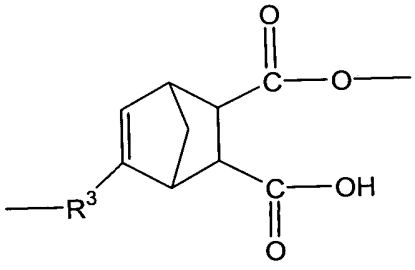

,


,


,


,


, and


,

where R^3 is a divalent hydrocarbon group, and R^4 is a hydrogen atom or alkyl group.

6. The organopolysiloxane-modified polysaccharide according to claim 1, wherein component (B) is a ligneous polysaccharide, polysaccharide obtained from fruit flesh and rhizome, plant adhesive substances, legume-derived polysaccharide, seaweed-derived polysaccharide, microorganism-produced polysaccharide, polysaccharide of animal origin, or a derivative of these polysaccharides.

7. A process for the preparation of organopolysiloxane-modified polysaccharide comprising esterification reacting;

(A) an organopolysiloxane having residual carboxylic anhydride groups, and

(B) a polysaccharide having hydroxyl groups,

in the presence of

(C) a non-protonic polar solvent.

8. The process for the preparation of organopolysiloxane-modified polysaccharide according to claim 7, wherein component (A) is an organopolysiloxane having the formula, $R^1_a R^2_b SiO_{(4-a-b)/2}$

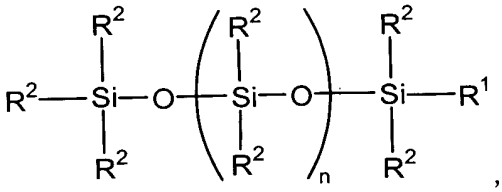
where R^1 is a monovalent organic group containing a residual carboxylic anhydride,

R^2 is a hydrogen atom or monovalent hydrocarbon group

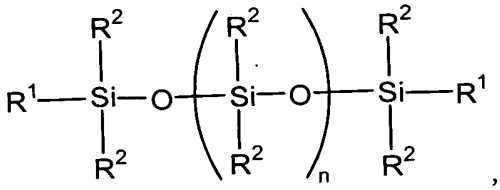
with the proviso that at least one R^2 is a monovalent hydrocarbon when b is greater than 1,

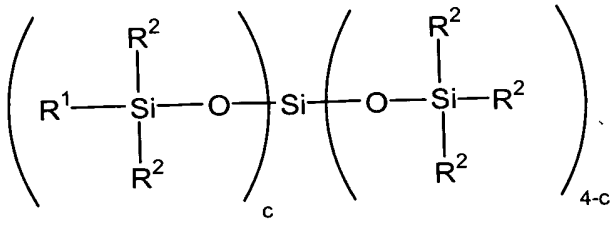
and the subscripts "a" and "b" are numbers satisfying the conditions $0<a\leq 1$, and $0<b\leq 3$, respectively, and $0<a+b<4$.

9. The process for the preparation of organopolysiloxane-modified polysaccharide according to claim 7, wherein component (A) is an organopolysiloxane having the formula selected from the group;



,





where R^1 is a monovalent organic group containing a residual carboxylic anhydride group,

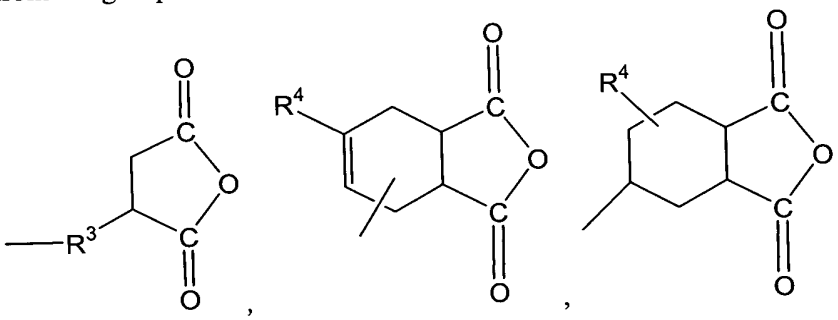
R^2 is a hydrogen atom or monovalent hydrocarbon group,

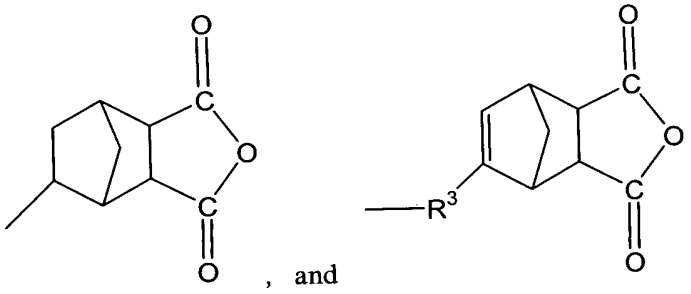
with the proviso that at least one R^2 is a monovalent hydrocarbon,

n is an integer greater than zero, and

c is an integer from 1 to 4.

10. The process for the preparation of organopolysiloxane-modified polysaccharide according to claim 8 or 9, wherein the residual carboxylic anhydride has a formula selected from the group:





, and

,

where R^3 is a divalent hydrocarbon group, and R^4 is a hydrogen atom or alkyl group.

11. The process for the preparation of organopolysiloxane-modified polysaccharide according to claim 7, wherein component (B) is a ligneous polysaccharide, polysaccharide obtained from fruit flesh and rhizome, plant adhesive substances, legume-derived polysaccharide, seaweed-derived polysaccharide, microorganism-produced polysaccharide, polysaccharide of animal origin, or a derivative of these polysaccharides.

12. The process for the preparation of organopolysiloxane-modified polysaccharide according to claim 7, wherein component (C) is *N,N*-dimethylacetamide, *N,N*-dimethylformamide, dimethyl sulfoxide, or hexamethylphosphortriamide.